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ABSTRACT

By measuring respective inductances of coils that a stator (60) comprises by using an inductance measurement unit, an inductance distribution in the stator (60) is obtained, the inductances varying in accordance with the positional relation between the stator (60) and a mover (51) having a magnetic flux generator. And based on the obtained inductance distribution the two dimensional position and yaw of a stage member (18) is detected. By controlling the direction and amplitude of each of electric currents supplied to the coils based on the detection result, the position of the stage member (18) is controlled. As a result, regardless of the position and yaw of the stage member (18), the position of the stage member (18) can be controlled.